Sauget Area 2 Superfund Site

EPA Meeting

Taken on: June 12, 2013

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U.S. Environmental Protection Agency

Community Involvement Meeting

for

Sauget Area 2 Superfund Site

St. Clair County, Illinois

June 12, 2013

A Community Involvement Meeting was held at the offices of the Cahokia Village Hall, 103 Main Street, in the Village of Cahokia, State of Illinois, on the 12th day of June, 2013 which was recorded by means of machine shorthand and hereto transcribed by Mary L. Peppenhorst, Missouri Certified Court Reporter (No. 545), Illinois Certified Shorthand Reporter (IL #084-003856), Registered Professional Reporter (#804416) and Notary Public.

APPEARANCES:

FOR THE EPA:

Ms. Patricia Krause
Community Involvement Coordinator

Ms. Stephanie Linebaugh
Remedial Project Manager

Mr. Paul Lake
Ms. Michelle Ryan
Mr. Robert Carson
Illinois EPA

Ms. Lisa Condiff
Mr. Phil Smith
Mr. Barrie Selco
CH2M Hill

(On the record at 6:38 p.m.)

MS. KRAUSE: Hello. Thank you for coming out tonight. We look forward to presenting and also to hearing from you. EPA's presentation will share details about the recommended clean up plan for the Sauget Area 2 Superfund Site. You will have the opportunity to formally make a comment or ask a question. A transcriber is here to take your comments and questions. During the public hearing that's the time for the public to talk and we will not be responding at this time. At the end of the comment period EPA will prepare a written statement of significant comments, criticisms and any new relevant information given along with EPA's response to each issue. We'll do a presentation, we'll take questions, have a short break, then start the public comments. If you'd like -- if you want to make a comment, you'll have a chance to do so. And it's not a big group. Sometimes we have people sign up but I think we can work it out where a person can make a comment. For introductions I'm Patricia Krause. I work as a community contact for the US Environmental Protection Agency. Stephanie

Linebaugh is EPA's project manager for the Sauget Area 2 site and she will talk about the site and explain EPA's proposed clean up plan. Also here from the Illinois EPA is Michelle Ryan, Paul Lake, Robert Carson and I believe that's it from Illinois EPA.

Okay. We have some ground rules for public comment and one of them is that everybody who wants to comment gets a chance. One speaker at a time. And, you know, there are some time limits so we ask to be considerate of that when you're making your comments. I'll call your name out and you can come up to the microphone -- well, no, I'll call you. Raise your hand that you want to speak. Please say your first and last name and spell your last name for our transcriber. And then also share if you're affiliated with an organization and then make your comment. So now we'll start with Stephanie.

BY MS. LINEBAUGH:

Good evening. As Pat mentioned, I'm Stephanie Linebaugh. I'm the EPA project manager for the Sauget Area 2 site and I'm here to present the proposed plan for the site. And just for your

reference, I have a couple images that you can look at as I'm going through the presentation. We're going to go through a couple of introductions. I'm going to discuss EPA's proposed plan. You can ask questions and get some answers -- or you're going to ask questions and there will be the opportunity to comment. So in addition to myself and Patty I also have EPA's contractor we have Lisa Condiff EPA's oversight contractor with CH2M Hill; Phil Smith, CH2M Hill; and Barrie Selco, CH2M Hill. And Paul Lake is here as well with Illinois EPA.

Just to give you an overview of the area in general, the Sauget Area 2 site is the site outlined in red. There's also some neighboring areas of CERCLA site up north in orange which is the Sauget Area One site which I was recently here giving a proposed meeting on. The outline in green is a RCRA facility, the Krummrich facility, which is also nearby in the area.

The Area 2 site consists of other sites O, P, Q, R and S. And this is another overview just so you can get an idea of the site you're looking at on the Mississippi River and there's a variety of industries in the area around the site. The site

consists of five inactive disposal areas O, P, Q, R and S. Three are closed landfills. P, Q and R, one consists of four former sludge lagoons which is site O and there's a former waste disposal site, site S.

Just an overview of the contamination history at the site, there's a variety of industrial, municipal waste and contaminated soils that are present in the closed waste disposal areas. Disposal areas contain a variety of like crushed drums, uncontained wastes, construction debris and miscellaneous trash. Contaminants include a variety of volatiles and semi-volatiles, organic compounds such as chlorobenzenes, benzene and there's PCB, dioxins and biphenyls as well as some of the main contaminants.

There has been a lot of work already done at the sites. We've already been making progress throughout the years. Beginning back in 1979 Illinois EPA did construct the sand fills to cover site R which is the one closer to the river over here, put on a clay cover consisting of about five feet of clay over the waste disposal area at site R. And then again in 1985 Illinois had Monsanto again put some riprap along the river embankment. Then in

1995 and in 1999 EPA had two removal actions along site Q, one we removed about 17,000-tons of mainly PCB contaminated soils as well as over 3,200 drums were removed and disposed offsite. Then in 2000 EPA issued an order for the responsible parties to perform remedial investigation and feasibility study and there was the field work which was the remedial investigation part which spanned from 2000 to 2007 and it was a quite extensive investigation with supplemental investigations on the site. In 2002 there was an interim ROD for the operable unit two which is the groundwater and that -- the EPA issued an interim remedy for that. They constructed a barrier wall along site R. So this is site R (indicating). There was a barrier wall that was constructed around that disposal area. And the main focus of that interim remedy was for groundwater, to capture groundwater coming from -- contaminated groundwater coming from site R as well as capturing part of the off site sources as well. This also occurred the barrier wall and the groundwater migration and controls here are referenced as GMCS. Then in 2009 EPA finalized their remedial investigation report and summarized all the field

activities and kind of captured the nature and extent of the site and contamination of the site. And then this past May we finalized the feasibility study which kind of assessed all the data obtained to date and looking at alternatives to determine the best approach for remedying the sites.

So, as I mentioned, there was early action but we did do the removal actions on Q south along the river bank called Q central 95 and Q south was the drum removal as well as the soil removal and this just covers interim action map for OU2. To be more specific about the barrier wall, the 3500-foot span, site R barrier wall, goes down approximately 135 feet and to the bed rock. There's a pump and treat system where the water is pumped. It's treated through the American Bottoms facility before being discharged in the river. It captures approximately 98 percent of the contaminated water from Area 2. It also captures a significant amount of contaminants from upgrade sources off the site.

So through the remedial investigation the disposal areas O, P, Q, R and S were identified as the source areas. There was also identified DNAPLs, dense non-aqueous phase liquid in groundwater under

portions of site P. And there was also some intact drums that were identified on site Q south. Just an overview of the human health risk assessment summary. The risk assessment evaluated trespassers, recreational fishers, industrial workers, construction and utility workers. It evaluated potential exposures to soil, waste, leachate, groundwater, surface water, sediments and fish tissue. Some of the main contaminants for the Sauget Area 2 sites were PCBs and dioxins. And potential risks above EPA's acceptable levels were identified at all the sites on Sauget Area 2.

The ecological risk assessment summary: Potential ecological risks evaluated on the Mississippi River and sites O, P, Q, R and S. There's no current ecological risks associated with sediments or surface water and potential risks to herbivores and carnivores were identified at site O and site Q south from dioxins and furans in soil.

So I'm going to go over an overview of the alternatives that we looked at for determining what was the best approach for identifying a remedy for the site. EPA always looks at a no action alternative. So for each of the sites O1, P1, Q

north 1, Q central 1, Q south 1, R1 and S1 they were evaluated as no action alternatives which has zero positives and says we do nothing.

So for site O these are the alternatives -- For site O this is site O here (indicating), we had looked at three alternatives in addition to the no action alternative. Alternative O2 consists of a cap over the -- I'll just quickly describe the map. So this shows the outline of the cap areas that are being proposed for alternatives O2 and O4. The yellow shaded area is the extent of the cap that is in the proposed alternatives. The blue outlined areas are the areas of potential mobile source areas which are just areas that have really heavily contaminated soils. So there wasn't like any liquids identified in the area. They're potentially leachable soils. So for the O2 alternative the yellow area would be capped with the Illinois 35 IAC 724 compliant soil cover over the yellow are in addition institution controls and access controls would be put in place.

Alternative 3 is similar as far as the extent of the covers except with Alternative 3 we looked at soil technology over those potential

leakable source areas identified. So the areas that are identified in green over the blue areas this alternative looked at photo technology in those areas with a 724 compliant cover over the remainder of the waste mass with institutional access control. And then the O4 alternative is similar to the OU2 alternative except you would -- this one includes the RCRA subtitle C full design hazardous waste cap. And as you can see, the cost for Alternative two is $6.3 million; Alternative 3, $5.8; and Alternative four, $16.2 million.

So for site P we evaluated in addition to the no action alternative there were three additional alternatives we looked at. So this is for sites P. The yellow areas are the areas that would have covers or caps on. The blue outline areas are, as I mentioned before, those are potential mobile source areas. The little black square up here, that's a parking lot and that would be -- when I speak of an asphalt cover area, that's what I'm speaking of. So for P2 it would be an asphalt cover over the potential mobile source area that's around the parking lot. This site would get an 807 cover over the yellow areas, which is the

waste, the waste mass. It would include vapor intrusion mitigation as well as institutional controls. There's also -- so that's alternative P2.

For alternative P3 there would be an addition of NAPL collection. As I identified before, there was a NAPL identified in site P and there would be collecting of NAPL in this area as well. With the covers going over the yellow area as well and it would be the 807 solid waste landfill covers. This would also include the vapor mitigation -- vapor instruction mitigation as well as institutional and access controls.

Alternative P4 would include as developed for alternative P3 the asphalt cover over the parking lot area and mobile source area, a RCRA subtitle C design cover over the yellow areas, and as well as the vapor intrusion mitigation and institutional controls.

So for site Q north then in addition to the no action alternative we evaluated four alternatives. And for site Q north alternative 2 we looked at the yellow areas a 724 compliant cover over the dog leg area, it's like part of Q north is the yellow outlined area, vapor intrusion mitigation

as well as institutional controls and access controls.

Q north 3 alternative, identical to Q north 2 except we are looking at a RCRA subtitle C hazardous waste cap over the yellow area.

And for Q north 4 there would be a RCRA subtitle cover over the whole extent of Q north. And there would be identified waste areas vapor intrusion mitigation and institutional access controls.

And then for -- so Q5 is similar to Q north here except the yellow areas would be just the 724 compliant crushed rock cover over the yellow areas with a vapor mitigation -- vapor intrusion mitigation and institutional and access controls.

For site Q central the alternatives we looked at were alternative Q central 2 we're looking at over the yellow areas -- I don't know if you guys can see but the highlighted yellow shaded there there's a blue area at the bottom. That's again, one of those potential mobile source areas where it's just identified as heavily contaminated soil. Not heavily but they're above TACO, the Illinois TACO limit a hundred times. So they have that

potential to leach.

And then the orange, I don't know if you can see the orange part but that's been identified as the risk area is the orange dash outline which is hard to see. Anyway, alternative 2 for this site consists of 724 compliant crushed rock cover over the identified waste areas which is the shaded yellow and institutional and access controls as well as erosion protection along the river.

Alternative QC3 includes the 724 compliant cover over the identified waste areas, shoreline protection along the river, soil vapor extraction in the blue circled area which is the area of potential mobile source area and then institutional and access controls.

And then site QC4 alternative is the same identified shaded yellow area would be the RCRA subtitle C designed cover over some of the identified waste areas, shoreline protection along the river abatement and institutional and access controls.

Site Q south alternatives, so just to point out the yellow areas are the areas that would have proposed capping or covers. The blue areas are the

potential mobile source areas. The green area is an area that we identified as principal plant waste. The light blue area is an area that was identified as potential ecological risk area. So for Q south 2 this would include removal of intake drums which are identified in the green circle. 724 compliant crushed rock cover over the identified risk areas, the yellow areas, and institutional and access controls.

Q south 3 would include removal of intact drums, 724 crushed rock cover over identified waste areas and institutional and access controls.

And then Q south 4 is the same except it would include a RCRA subtitle C designed cover over the yellow areas and institutional and access controls.

For site R in addition to no action, we looked at two alternatives. Alternative R2 is a 724 compliant cover over the entire site which is also identified as, you know, potential mobile source area over the entire site here for site R and institutional and access controls. Alternative R3 we're looking at a RCRA subtitle C cover over the entire site R in addition to the institutional and

access controls.

Site S alternative is a much smaller area. It's about apron size. We looked at alternative S2 which is a 724 compliant soil cover over the entire area and institutional and access controls.

S3 in situ treatment of the potential mobile source areas which is the blue outline which is the entire site. A 724 compliant cover over the entire site and institutional and access controls.

And alternative S4 would include the RCRA subtitle C cover over the entire site with institutional and access controls.

Part of the process of coming through with a remedy for a site we looked at nine remedy selection criteria and those include the threshold criteria which is overall protection of human health and environment as well as compliance with our applicable and relevant and appropriate requirements which we call ARARs, our balancing criteria which is longterm effectiveness and performance, reduction of toxicity, mobility for volume through treatment, short term effectiveness and implementability and cost. And we have modified criteria of state acceptance and then community acceptance which is

one of the reasons we're here tonight.

So in going through all the alternatives for each of the sites we evaluated them against our nine criteria. So you can see for site O that no action does not meet any of the criteria but the other alternatives do. And I'll just go back. In looking at all the other alternatives they do meet -- this is for site P, again, no action does not meet the criteria. The other alternatives do meet the threshold criteria. And for site Q north the no action does not meet our threshold criteria, nor does Q north 3 meet the ARARs or Q north 4. For site Q central the no action alternative does not meet our threshold criteria and for Q central 4 it is not in compliant with the ARARs. And for Q south it does not -- no action does not meet our threshold criteria, nor does Q south 4. For our site R no action does not meet the threshold criteria, nor does the site alternative R3. And for site S the no action does not meet the threshold criteria but the other alternatives do.

So EPA's recommended alternatives for the Sauget Area 2 site are O2, P3, Q north 2, Q central 3, Q south 3, R2 and S3. These alternatives are

protective of human health and environment. They meet the state and federal regulations for the ARARs. They're implementable. They reduce toxicity, mobility or volume through some treatment. They provide long term and short term effectiveness and those alternatives are supported by the state of Illinois.

The estimated total cost for this remedy is $20.8 million. And the next steps fast forward, we've already implemented early action completed the remedial investigation phase. Just completed the feasibility study. So today we're here to give the proposed plan, preferred remedies and alternatives for clean up at the site. The next step will be once we present tonight, we hear your comments during the 30-day comment period, EPA will prepare a responsive summary which will be part of our record of decision, which is our final decision for the remedy selection for the site. That is scheduled to be completed in 2013. The next step after that would be remedial design, most likely in 2014. Remedial action implementation beginning in 2015 estimated and then after that every five years there will be a five year review. The public comment

period is a 30-day period. It started last Friday, June 7 and will run through July 8. We have documents for your review online at the website for the site as well as the Cahokia public library. And in addition to that we have all the documents at the EPA region site office. And you can send your public comments to Patty Krause who is the community involvement coordinator. And this information is also in the fax sheet that was mailed out to everyone. So if there's questions, we'll ask informal questions and then we'll take a break and open it for official comment.

AUDIENCE MEMBER: Could you explain the potential mobile source areas, which direction does it move, how does it move, why does it move, does it move up and down, does it move laterally?

MS. LINEBAUGH: The potential mobile source area is just soil that's contaminated above TACO limits of times a hundred. So it's not actually mobile. It just has that potential of leaching and maybe Phil if you want to try and answer it.

MR. SMITH: Yeah. It's soil that's contaminated above a hundred times above the TACO limits. So it has the potential to leach but for

now it hasn't leached very much. We have monitoring wells down regularly. So in many cases even though the soil suggested it could leach, it's fairly open to leakable soil so not much leaching is occurring.

AUDIENCE MEMBER: How does the river level affect the sites?

MS. LINEBAUGH: You mean the rising and dropping river level? I mean, the water table is pretty low, it's about 10, 15 feet, the water level at the Area 2 site. So when the water -- the river is high the water level comes up so I mean it's going to be higher than the waste.

MR. SMITH: It does reverse the gradient occasionally and the gradient will come back a ways but the net long term effect is still towards the river.

AUDIENCE MEMBER: Is local ecological enhancement or restoration being considered for any mitigation of any of these impacts or is it purely from a contaminants standpoint?

MS. LINEBAUGH: We're looking at protecting human health and environment is our main focus but I know there is an NRD, National Resource Trustees, that are looking at the site as well for damages,

resource damages.

AUDIENCE MEMBER: My name is Dave Jump, J-U-M-P, and this might be a stupid question but site Q isn't shaped the same here as it is there. Can you tell me which one is right?

AUDIENCE MEMBER: Looks like it goes all the way to the river on the eastern edge.

MS. LINEBAUGH: I see what you're saying. It looks like this is accurate.

AUDIENCE MEMBER: That one is accurate?

MS. LINEBAUGH: That one is correct, not this one.

AUDIENCE MEMBER: Okay. But that sort of area closer to the river you're not planning on doing anything --

MS. LINEBAUGH: That triangle that's like right here (indicating)?

AUDIENCE MEMBER: No. You're not planning on doing anything over here (indicating)?

MS. LINEBAUGH: This is site Q south, this area (indicating).

AUDIENCE MEMBER: But I think you were showing all the things you were proposing sort of over here, not over here (indicating).

MS. LINEBAUGH: They're kind of over here in the area. There's like the two ponds.

AUDIENCE MEMBER: So everything kind of this side of the rail track toward the river you're not doing anything?

MS. LINEBAUGH: Right.

AUDIENCE MEMBER: Okay.

MS. LINEBAUGH: Can you put QS3 up? That's under the cover.

AUDIENCE MEMBER: Can you show me site O? Are you aware that there's work to change to put in an overpass that might cause a rail track to come through here (indicating)? Is that okay?

MS. LINEBAUGH: That's the first I've heard of that. I'm not aware of that.

AUDIENCE MEMBER: But I mean as long as it's sort of up on top of everything that's okay, isn't it?

MS. LINEBAUGH: I wasn't aware of it.

AUDIENCE MEMBER: You mentioned when you were giving your presentation about dioxin but yet I don't remember seeing dioxins listed anywhere on any of the sites. Where are they and why aren't they listed?

MS. LINEBAUGH: Well, dioxins were just like -- they're evaluated during the risk assessment. So I'm going to have to talk with Barrie.

MS. SELCOE: Dioxins were present in the soils I believe at all of the different sites and it caused the risk estimates for different receptors to exceed EPA's acceptable levels and that's why the covers are being placed on the different sites. Dioxin was one of the main chemicals that would cause that decision to be made.

MS. LINEBAUGH: And it was for direct contract.

MS. SELCOE: That's right. By construction workers hypothetically.

MS. LINEBAUGH: This is just simplified in the mailings that you get. It's more streamlined but there's also a technical proposed plan that has more details and more information.

MS. ANDRIA: That's a huge -- something to leave out, I think so, dioxin.

MS. LINEBAUGH: We do mention dioxins in the technical lingo. We list all the risk assessments.

MS. ANDRIA: The people reading this, the

same -- calling something an oily liquid and not identifying what it is is something that I think that's problematic. Anyway, let me go on. Do you have the diagrams in color, the insets? How you have them identified in a different color. That's very helpful. Do you have those on the website? I don't see them.

MS. LINEBAUGH: They're on the -- the one selected alternatives are included with the technical plan. And also the feasibility study is fully available on the website as well. So all the pictures are on the website as well as at the Cahokia library and the EPA office.

MS. ANDRIA: I want to go through a couple of the sites, I have a couple questions. Site O you talk about what the PCBs, oil and materials, heavy metals and other hazard substances. What other hazard substances in site O?

MS. SELCOE: If I could mention, the chemicals of concern that are driving the decisions dioxins and PCBs in surface soil and the same in subsurface soil and PCBs in the leechate material.

MS. LINEBAUGH: For site O?

MS. SELCOE: For site O north. There were

no risk driving chemicals in site O south.

MS. ANDRIA: Did you collect groundwater samples from this site? No. Why did you collect groundwater samples from this site and either not collect them at the other sites or not put them in the materials so people know?

MS. LINEBAUGH: Mentioned in the proposed plan, this proposed plan is directing soil and groundwater source areas. There will be a groundwater regional remedy selected that looks at the region groundwater between area one, Area 2 and regionally address groundwater. That will be a separate operable unit.

MR. SMITH: I was just going to add that we did investigate all the sites for groundwater and that will be in the RI report, the groundwater plume maps. So it has comprehensive maps for each hydrologic unit.

MS. LINEBAUGH: And the RI is available at the library, on the website, as well as the EPA office repository.

MS. ANDRIA: You mentioned that there were DNAPLs at site P. Are there DNAPLs at other sites?

MS. LINEBAUGH: Site P there was a defined

DNAPL. There was DNAPLs identified on Q north but that's groundwater and everything from that, those two areas, they are in Q north as being captured by the groundwater migration containment system.

MS. ANDRIA: Have you investigated the -- I mentioned at the area one hearing about the flood prevention district plans to pump groundwater. Have you investigated what that will do? How that will relate to this site and what it will do to the DNAPLs at the various sites here?

MS. LINEBAUGH: Well, the Army Corps has proposed that EPA can comment as well as Illinois EPA can comment in a couple years. In 2008 they revised their plan due to comments. They're looking to put in fresh relief wells along the levee that would be utilized in an emergency need of flooding. Might actually mean that those relief wells would pump most likely from the shallow aquifer which is much lower contaminants.

MS. ANDRIA: They have some of their oils are as deep as 64 feet I believe. That's pretty deep, isn't it?

MS. LINEBAUGH: Yeah.

MR. LAKE: It's in the middle.

MS. LINEBAUGH: Maybe you've seen more than I've seen. I didn't know that they were that deep.

MS. ANDRIA: When was the last time you've gone?

MS. LINEBAUGH: It's probably been a couple of years since I've seen any revisions.

MS. ANDRIA: I think you need to re-visit. Have you quantified the damage to natural resources?

MS. LINEBAUGH: That's -- There's a natural resources trustee group that's active in resource damages.

MS. ANDRIA: So when do we see that?

MS. LINEBAUGH: Paul, can you?

MR. LAKE: Well, I'm aware. I'm part of that group and we've been working on the assessment plan for the natural resource damages and we're looking forward to having a public meeting to discuss that assessment plan in the not too distant future. We don't have a date set yet but the plan is supposed to go to the federal register and not too long after that we're going to have a public meeting. So, you know, I think you'll be on our mailing list.

MS. ANDRIA: Okay. Site S, have the drums

removed been removed from the site?

MS. LINEBAUGH: On site S? There are no drums on site S.

MS. ANDRIA: They have not?

MR. SMITH: I don't recall us finding drums there.

MS. ANDRIA: Says it was a drum disposal.

MS. LINEBAUGH: Waste disposal.

MR. SMITH: It was a waste disposal area for sure. It's heavy contaminated soil.

MS. ANDRIA: So there haven't been?

MS. LINEBAUGH: No. I'm not aware of any drums. It was just a waste disposal area. There was no like drum disposal that we've been aware of or identified during the investigation. There were drums disposed on Q south that we've identified.

MS. ANDRIA: This is on your thing on site S I believe.

MS. LINEBAUGH: It says there's a waste disposal. It does say a drum disposal area but it's a waste disposal area cause there were no drums in site S.

MS. ANDRIA: What do the groundwater samples from that area show?

MS. LINEBAUGH: Excuse me?

MS. ANDRIA: What do the groundwater samples for site S show?

MS. LINEBAUGH: I don't know off the top of my head.

MR. SMITH: I don't recall precisely. I was expecting them to show considerable number of VOCs but I do recall it showed a lot less than I was expecting. I can't answer specifically. I can look up the maps on my computer and I'll tell you in a minute.

MS. ANDRIA: Your alternative 3 is $1.1 million -- I mean $1.0 million and S4 which puts a cap that promotes surface water drainage and minimizes infiltration cost less. Why is this alternative cheaper site?

MS. LINEBAUGH: Which site are you on.

MS. ANDRIA: Site S. I'm still on S. I'm sorry.

MS. LINEBAUGH: What was your question again?

MS. ANDRIA: If you're putting a more protective cover, a soil cover related cap on to minimize infiltration why is it cheaper?

MS. LINEBAUGH: Than which one?

MR. LAKE: Than the preferred alternative.

MS. LINEBAUGH: The preferred alternative we're doing that soil vapor extraction over the entire site in addition to the 724 cover.

MS. ANDRIA: So that $300,000 is -- there's no soil -- there's no vapor?

MS. LINEBAUGH: Not with the RCRA cap, no.

MS. ANDRIA: Site P?

MS. LINEBAUGH: I just want to see if there's anyone else that might have a question. There's a gentleman in the back.

MR. ALLEN: My name is Chris Allen. I just have a couple of questions. One, you have a remediation, proposed remediation plan that's going to cost X number of dollars. Then you mentioned that there were some issues that still needed to be dealt with as it related to groundwater.

MS. LINEBAUGH: Uh-huh.

MR. ALLEN: And will that potentially add costs to the remediation?

MS. LINEBAUGH: Well, the groundwater -- so for this proposed plan we're addressing contaminated soils and groundwater source areas. And then

there's also at site area one which I identified over in this area (indicating) I just presented a proposed plan back in March on those sites for the soil contamination as well as groundwater source areas. Those two sites have a commingling of the groundwater. So once those remedies are implemented we'll be looking at a regional groundwater remedy for the area for both sites.

MR. ALLEN: So there will be some additional costs to deal with that issue?

MS. LINEBAUGH: Potentially, yes. But, again, that's part of the process. We'll have to look at alternatives for selecting a remedy for the groundwater.

MR. ALLEN: Thank you.

MR. JUMP: When you're talking about a ground cover or a rock cover how much are you talking? 6 inches of rock? 6 feet of rock?

MS. LINEBAUGH: Well, for site Q, the crushed gravel covers are 12 inches. For the other like for site P it's 24 inches of cover for the 807 solid waste cap. And then there's also for the soil covers on O it's 24 inches as well.

MR. JUMP: 24 inches of soil?

MS. LINEBAUGH: Yeah. O is 24 inches total like the current -- Phil, do you have that?

MS. CONDIFF: It's in the FS.

MS. LINEBAUGH: It's in the FS? Oh, it's right there.

MR. JUMP: Is that like any kind of soil or do you have to use clay?

MS. LINEBAUGH: They're not -- for which site or for all?

MR. JUMP: Any place you're using soil.

MS. LINEBAUGH: Where there's soil it's 6 inches of soil top cover and then.

MR. SMITH: 18 inches of the --

MS. LINEBAUGH: 18 inches of the clay.

MR. JUMP: Clay? Okay. Like compacted?

MS. LINEBAUGH: Compacted clay.

MR. JUMP: Okay. Got it.

MS. ANDRIA: You have a no action alternative but you don't have a top of the line alternative that removes the contaminants from the floodplain; could you tell me why?

MS. LINEBAUGH: Well, during the investigation we were looking at identifying areas of risk that need to be addressed. Not the full

like waste mass is not an area of risk let's say. So removing the entire waste mass is not an alternative that needed to be evaluated.

MS. ANDRIA: Even though it's in the floodplain?

MS. LINEBAUGH: Even though it's in the floodplain doesn't mean that there's a risk. We're looking at the risk associated with these sites to the ones closest on the river side. The risk is the subject of direct contact for potential construction and utility workers. So there wasn't an estimated risk of direct contact. So just eliminating that risk for an exposure pathway with a cover makes the protection to health and environment. So there's no need to remove all that material.

MS. ANDRIA: I wanted to ask your consultant to um also -- I want to know what the groundwater are samples at the other sites were that weren't listed?

MS. LINEBAUGH: Phil you want to talk to that?

MR. SMITH: Each of the sites has their own array I guess. It's best to look at the plume maps we published for I think for about 12 different

contaminants. The ones that were most prevalent across the whole area one and Area 2 sites the plumes are rather large. Chlorobenzene is the main contaminant. It's not necessarily associated with the Area 2 sites other than site R. Site R obviously was the most contaminated site and that's why the GCMS went around and captured 98 percent of the contaminant mass in groundwater from all the Area 2 sites. So that's the big thing. The other two percent of contamination is much less in concentration and in isolated areas from the other Area 2. Like Q central has some chlorobenzene, I recall that, specifically coming from that. It's at 150 micrograms per liter whereas the standard is a hundred. So it's over it but not grossly over like some of the other plumes are. Benezene is associated with Q south. I know that. Other contaminants site P was remarkably devoid of contamination emanating from that. I remember that. Very little, if anything. What else? Those are the big players that I recall. But if you were to go through those plume maps you could actually physically see and look at the unit maps. There will be like 12 of them. And each one you can look

at the site and see if it's down gradient. You also see big yellow areas designating plumes coming beneath them or onto them from up gradients from Area 2 from Krummrich.

MS. LINEBAUGH: And all the maps that Phil mentioned are part of the feasibility study and that's available online and in the library and at the RI.

MS. ANDRIA: Did you say that -- I can't remember whether I asked this or not, on site R that you removed some of the drums. Are you going to leave only the in tact ones there or --

MS. LINEBAUGH: For Q south?

MS. ANDRIA: For site R?

MS. LINEBAUGH: I'm not aware that there are drums that we left.

MR. SMITH: Site R was not investigated internally very much so we wouldn't know. I wouldn't be surprised if there's drums. That's not the issue. It's been contained. We did quite a lot of investigation to locate drums across all sites and then went in specifically to most of the sites and dug up those magnetic anomalies to look for drums. And it was only in Q south that we actually

found in tact drums that were excavated and removed. Site R, I don't recall.

MS. LINEBAUGH: There's already like five feet of clay cap already on Site R. Any other questions?

MS. KRAUSE: We'll take a short break and come back and we'll go in to the formal comment period.

(Whereupon, there was a break in the proceedings. The testimony resumes as follows:)

MS. KRAUSE: This is the formal public comment hearing. So this is where you'll state your name, spell your last name, and then make your comment. And it won't be -- this is where we don't answer the questions. And then Mary is our court reporter, our transcriber, and she'll take down the information. And this will be something that we collect your public comments and it will be part of the RCRA decision and we'll respond to them in the public responsive summary. So we can start with our comments, raise your hand, but state your first name and spell your last name and also if you're affiliated with a group. So let's start.

MS. ANDRIA: My name is Kathy Andria. A-N-D-R-I-A. I'm president of the American Bottom Conservancy and conservation chair for the Kaskaskia Group of the Sierra Club. Both groups have members who would be impacted by your decision in this matter. I'd also like my questions and your answers from the question period to be placed in to the official comment section.

There have been several sand boils in the Metro East levee system designed to protect the Sauget/Cahokia/East St. Louis area from the Mississippi River. Have you taken in to account the present condition of the levee since using your alternatives. Have you taken in to account climate change more intense rainfall and snow storms resulting in higher river levels and their impacts on levees in choosing your alternatives. And most importantly, do you realize that the Southwestern Illinois Flood Prevention District's plan to repair the levees in conjunction with the Corps of Engineers includes bringing up water from relief wells as much as 64 feet deep and pumping it untreated into adjacent wetlands and the river. There are a number of such relief wells proposed in

the stretch from East St. Louis through Sauget and Cahokia. This has the potential to bring up DNAPLs to the surface which totally negates all your proposed alternatives. Despite your plans to keep the contaminants in place and eliminate exposure to humans and wildlife, those efforts will be undone by the breaking up of contaminants in the groundwater to the surface. It is crucial that you include the Corps and the levee project as part of this project. We very much appreciate your proposal to restrict future access to the sites but the groundwater pumping negates that restriction.

The Southwestern Illinois Flood Prevention District plan is to repair the levees to get 100 year or 1 percent certification from FEMA and the Corps so that development can continue in the floodplain. The Corps admits it has not considered climate change in its equation to determine a 100 year event. Some scientists have suggested that the 100 year event is really just a seven year event. Getting certification by FEMA is expected by 2015. It could be many more years before the Corps has funding to repair the levees to the authorized level of protection said by the Corps variously to be a

500-year level or a 350-year level. Again, they have not considered climated change in their determination.

Development in the floodplain will cause increased interior flooding which will impact the Sauget area sites, Area 2 sites, and cause increased water on the landward side of the levee, coupled with higher river levels on the other side of the levee that will put the levees protecting the American Bottom at severe risk. In addition, we are in the New Madrid seismic zone and the area is at risk for severe liquefaction. Our levees were built on sand and not built to withstand an earthquake. Scientists say the New Madrid is due for a major event. Have you considered the potential for earthquakes and levee failure in your risk assessments or in choosing your alternatives?

Number three of the evaluation criteria for superfund clean up alternatives is long term effectiveness and permanence. That is how well an alternative will work over the long term, including how safely remaining contamination can be managed. How will the contamination be managed in the event of a levee breach? How will the contamination be

managed in the event of an earthquake? How will the contamination brought to the surface by the levee repair project relief wells be managed?

On all sites you list a no action alternative but you fail to list a remove from the floodplain alternative. Given the nature of the site in the floodplain and given the vulnerability of the levees and climate change impacts we strongly urge you to do so. How does covering the contaminants in place rather than removing them entirely from the floodplain satisfy the Superfund evaluation criteria for long term effectiveness and permanence.

The Illinois EPA has already granted the FPDC a 401 permit that allows the levee districts to pump groundwater from relief wells untreated into the river, including the Sauget Superfund area. At the public hearing for Sauget Area 1 I asked what impacts that would have. I believe you indicated that it would effect Sauget Area 2, the sites nearer the river and that I should bring it up at this hearing.

While I understand there are discussions and design work underway by the Corps to construct an

additional barrier wall or walls, I don't believe there has been a change in the plans to pump groundwater untreated from the wells. And given what Stephanie said, I'm not sure that there's been the communication that I requested between the Corps and the EPA.

We renew our concern and believe that that must be a part of your consideration for this project and that you must ensure that the Corps does not allow that. We also believe that the cost of any treatment of water from relief wells in this area should be paid for by the PRPs of Sauget Area's 1 and 2 rather than by the levee districts and taxpayers. It is up to you to enforce that.

In addition, any barrier walls constructed by the Corps or the FPDC in the area of Sauget Areas 1 and 2 should be funded by the PRPs, not taxpayers. They have caused the contamination and must bear the costs of dealing with the contaminants.

The risk assessments look at the different ways people may be exposed and then determine the potential health risks. Was a risk assessment performed to look at the potential of a levee breach? Flood water carrying contaminants and

perhaps scouring covered landfills could expose residents in Sauget and Cahokia to toxic waters. The contaminated flood water would also be carried downstream to other communities and in to water supplies.

We renew our concern for the damage to natural resources and look forward to commenting on that but shouldn't that have been determined before selecting cleanup alternatives? That's all the more reason to remove all contaminants from the floodplain. Quoting from you "Ecological risk assessment evaluated potential effects to fish and wildlife from exposure to chemicals in the Mississippi River. Lowered risk to people and aquatic organisms and no adverse ecological impacts were identified from the sediment in the Mississippi River. No risks to fish populations including federal engaged pallid sturgeon.

The ecological risk assessment did not evaluate the risk to fish and wildlife due to levee project pumping groundwater from relief wells bringing contaminated groundwater to the surface and releasing it untreated to the river and adjacent wetlands.

Partial cleanups are not permanent and could endanger people, wildlife and the environment both from levee relief well pumping and in the event of a levee breach. The alternatives must include the removal of contaminants from the floodplain.

You must include the levee projects relief well pumping under your plan and the PRPs must be directed to pay for the cost of treating the contaminated water.

We want to thank the people from all the agencies who have worked so hard for so long on these sites. We know how complex the site is, how horrific the contamination is and how difficult the decisions are, but the decisions you make could have grave impacts upon the people of our communities, on those living downstream, on the fish and wildlife and the echo system. Those who have caused this contamination must be made to pay to clean it up and you must not allow the levee repair project to undo the safeguards you are trying to put in otherwise all your work, your efforts, your plans are for naught. Thank you.

MS. KRAUSE: Anybody else? Now if you don't want to make a comment here, we have the comment

form in the fact sheet and there's also a link on the EPA's web page which is referenced in the fact sheet. And you could e-mail me comments, you know, and we have I believe through July 8th. The public comment period then is ended. Thank you.

(Off the record at 7:55 p.m.)

State of Illinois

SS.

County of Madison

I, Mary L. Peppenhorst, a Certified Court Reporter in and for the State of Illinois, duly commissioned, qualified and authorized I hereby certify that I was attended at the offices of Cahokia Village Hall, 103 Main Street, in the City of Cahokia, State of Illinois, by the aforesaid parties; on the 12th day of June, 2013.

Said public and EPA comments being by me reported in shorthand and caused to be transcribed into typewriting, and that the foregoing pages correctly set forth the comments of the aforementioned, together with the questions propounded and remarks thereto, and is in all respects a full, true, correct and complete transcript of the questions and propounded to and the answers and comments given by attendees.

I further certify that I am not of counsel or attorney for any of the parties, not related to nor interested in any of the parties or their attorneys.

Completed this 2nd day of July, 2013.

Mary L Peppenhorst

Mary L. Peppenhorst

Missouri Certified Court Reporter

Illinois Certified Shorthand Reporter

Registered Professional Reporter

SUBSCRIBED AND SWORN TO
before me this 2nd day of
July A.D., 2013.

Laura Davis

OFFICIAL SEAL
LAURA DAVIS
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:10/19/16

NOTARY PUBLIC

KEYWORD INDEX